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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

AUGHENBAUGH, WALTER

ART UNIT	PAPER NUMBER
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1772

DATE MAILED: 04/18/2002

7

Please find below and/or attached an Office communication concerning this application or proceeding.

49-7

Office Action Summary

Application No.

09/700,840

Applicant(s)

BERGHOLTZ ET AL.

Examiner

Walter B Aughenbaugh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. -See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

2. This application does not contain an abstract of the disclosure as required by 37 CFR 1.72(b). An abstract on a separate sheet is required.

3. The disclosure is objected to because of the following informalities: "interjacent" (page 1, line 15) is not an English word, the full names represented by the abbreviations HDPE (page 1, line 16), UHT (page 1, line 19) and ASTM (page 4, line 6) are not disclosed. The full name represented by the abbreviation HDPE is given on page 4, lines 3-4, but should be given with the first occurrence of HDPE on page 1. The abbreviation "int. al." on page 1, line 18, should be written in full form. Appropriate corrections are required.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

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5. Claims 1-3, 5 and 6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In regard to claim 1, the phrase "single multi-layer type" (first line of claim) renders the claim indefinite because it is unclear as to what the term "single" refers to. A multi-layer structure has more than a single layer. If claim 1 is meant to be drawn towards a single composite of multiple layers, the phrasing should be amended to reflect this condition.

In further regard to claim 1, the prepositional phrase beginning "in a quantity between..." (fifth and sixth lines of claim) must be included in a single sentence with the rest of the claim. It is unclear to what exactly the quantity range of 3-80% is directed towards. The abbreviation "approx." must be replaced with "approximately".

In regard to claim 2, the phrase "a plastic of polyolefin type" (third line) is indefinite because it is unclear what is meant by "polyolefin type".

In regard to claim 3, the full name represented by the abbreviation "ASTM" must be given.

In regard to claim 5 and 6, "interjacent" (fifth line of claim 5 and third line of claim 6) is not an English word. "Adjacent" or a similar word should be used in the place of "interjacent", provided that the use of "adjacent" is consistent with the intended meaning of the claim.

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person

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having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
7. Claims 1 and 2 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akao et al.

Akao et al. ('741) teach a packaging material with at least one light-shielding layer.

Figure 2a shows an example layer construction (Example I) for the invention disclosed by Akao et al. (col. 45, line 57 and col. 3, lines 3-11). Item 3a is a light-shielding polyolefin resin layer (col. 45, lines 63-64) and item 7a is a light-shielding thermoplastic resin layer (col. 46, line 13).

Akao et al. identify carbon black as a particularly preferable light-shielding material (col. 16, lines 29-33). Carbon black is used in both layers 3a (col. 46, line 7) and 7a (col. 46, lines 25-26) of Example I. Inorganic compounds (i.e, minerals) having a refractive index of not less than 1.50 are also cited by Akao et al. as preferable light-shielding materials (col. 17, lines 19-36).

Dolomite, with a refractive index of 1.59, is disclosed as a representative example of a preferable light-shielding material (col. 17, line 32). Dolomite is used in the applicant's illustrated example as the light-shielding mineral (page 5, line 34 – page 6, line 3). Akao et al. teach that a suitable content of light-shielding material is 0.01 to 30 wt. % (col. 19, lines 26-31), and a content of 0.05 to 50 wt. % of light-shielding material is claimed for the flexible sheet 3a (col. 55, lines 60-62).

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Akao et al. do not explicitly teach that a combination of carbon black and mineral particles may be used in a single plastic layer. However, one of ordinary skill in the art would have recognized that the combination of carbon black and mineral particles would be used in a single plastic layer since Akao et al. disclose that both carbon black and minerals such as dolomite that have refractive indexes of not less than 1.50 are preferable light-shielding materials.

Therefore, it would have been obvious to one of ordinary skill in the art at the time the applicants' invention was made to have combined both carbon black and a mineral such as dolomite in a single plastic layer of Akao et al. since both materials are used as light-shielding materials in the packaging material as taught by Akao et al.

8. Claims 3 and 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akao et al. in view of Rosen.

Akao et al. teach a packaging material with at least one light-shielding layer as described above. Akao et al. also teach that flexible sheet 3a has heat-sealability (col. 3, lines 3-5 and col. 55, lines 4-5). Akao et al. teach that heat-sealable layers may be formed from polyolefin resins, and that ethylene copolymer resins are preferred heat-sealable polyolefins due to excellent heat-sealing properties (col. 7, line 65 through col. 8, line 4). Ethylene-propylene copolymer is disclosed as a suitable ethylene copolymer resin (col. 8, lines 5-7). Akao et al. does not teach that the ethylene-propylene copolymer has a melt index between 0.5 and 5 according to ASTM (2.16 kg; 230°C). Rosen, however, teaches a packing material in web or sheet form made from a mineral-filled propylene-based polymer with a melt index of between 0.5 and 5 according to ASTM (2.16 kg; 230°C) (col. 3, lines 43-47). Rosen discloses that preferably the propylene-based polymer is chosen among propylene-ethylene copolymers with a melt index within the

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above specified range of between 0.5 and 5 since those copolymers have been able to withstand folding and bending operations without cracking even at low temperatures which normally occur during the conversion of the packing material into fold packing containers and the subsequent filling of the fold packing containers with liquid food, such as milk (col. 3, lines 55-64).

Therefore, one of ordinary skill in the art would have recognized to use a propylene-ethylene copolymer with a melt index of between 0.5 and 5 according to ASTM (2.16 kg; 230°C) as the plastic for the carbon black and mineral-filled layer in order to achieve superior mechanical properties even at low temperatures as taught by Rosen.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used in Akao's packaging material with at least one light-shielding layer a propylene-ethylene copolymer with a melt index of between 0.5 and 5 according to ASTM (2.16 kg; 230°C) as the plastic for the carbon black and mineral-filled layer in order to achieve superior mechanical properties even at low temperatures as taught by Rosen.

9. Claims 5-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Akao et al. ('741) in view of the applicants' admission (specification, page 1, lines 12-17 and page 2, lines 3-11).

Akao et al. teach a packaging material with at least one light-shielding layer as described above. Akao et al. also teach that the flexible sheet (item 3a) may be a coextruded multilayer film formed by coextruding two or more thermoplastic resin layers simultaneously (col. 6, lines 13-20). One of ordinary skill in the art would recognize that the coextrusion process yields a multilayer film with the layers permanently united without binder or adhesive. Akao et al. does not teach that the mineral-filled layer containing carbon black is surrounded by outer layers of

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plastic on both sides of the layer. However, a packaging material for bottles that has a middle layer of high-density polyethylene (HDPE) with admixed particles of carbon black and outer layers of HDPE on both sides of the middle layer is well known in the art (specification, page 1, lines 12-17). It is also well known that the carbon black in the middle layer of this prior art bottle makes the middle layer blackened, which gives the bottle an unappealing appearance (specification, page 2, lines 3-7). The outer layers of the prior art bottle are thus provided with a white pigment in a sufficient quantity to conceal the blackened middle layer to give the bottle a more consumer-attractive white appearance (specification, page 2, lines 7-11).

One of ordinary skill in the art would have thus recognized to surround the mineral-filled layer containing carbon black as taught by Akao et al. with outer layers of plastic on each side, and to add white pigment or other white coloring agent to one of the outer layers, in order to conceal the dark color of the middle layer that is due to the carbon black in the layer.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have added a layer of plastic to both sides of the mineral-filled layer containing carbon black of Akao et al., and to have added white pigment or other white coloring agent to one of the outer layers, in order to conceal the dark color of the middle layer due to the presence of carbon black as taught by the applicants' admission of prior art.

10. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Akao et al. ('741) in view of Johansson et al. (WO 97/13637).

Akao et al. ('741) teach a packaging material with at least one light-shielding layer as described above. Akao et al. ('741) does not teach that the packaging material of claim 1 undergoes a combined extrusion and blow molding operation to produce a package, preferably a

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bottle. Johansson teaches a combined extrusion and blow molding operation to produce a bottle (page 7, line 34 – page 9, line 17 and Figures 2A-2D). A bottle produced from the packaging material of the instant application may be produced by this production technique, which is well-known to a person skilled in the art and is described in published Swedish Patent Application No. 9503537-4 by Johansson (WO 97/13637, see page 7, lines 20-26 of the instant application).


~~Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention~~
was made to have applied to the packaging material with at least one light-shielding layer of Akao et al. the combined extrusion and blow molding operation as taught by Johansson.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Walter B Aughenbaugh whose telephone number is 703-305-4511. The examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Harold Pyon, can be reached on 703-308-4251. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9310.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

wba
04/16/02


HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

4/16/02